SEE FOLLOWING NOTE

WE REGRET THAT THIS DOCUMENT MAY BE INCOMPLETE AND/OR PARTIALLY ILLEGIBLE.

SINCE THERE ARE NO BETTER COPIES AVAILABLE, MICROMEDIA HAS DECIDED TO FILM THE DOCUMENT FOR ARCHIVAL PURPOSES.

VOIR NOTE CI-APRES

NOUS REGRETTONS QUE CE DOCUMENT N'EST PAS COMPLETE ET/OU EST EN PARTIE ILLISIBLE.

MEILLEURS COPIES N'EXISTENT PAS DONC MICROMEDIA A DECIDE DE FILMER LE DOCUMENT POUR LES BESOINS DES ARCHIVES.

micromedia
a division of IHS Canada

20 Victoria Street
Toronto, Ontario M5C 2N8
Tel.: (416) 362-5211
Toll Free: 1-800-387-2689
Fax: (416) 362-6161
Email: info@micromedia.on.ca

Canada's Growing Economic Relations *with the* United States

Maximizing Our Opportunities

Part 1 — What are the key dimensions?

Foreword

This two-part study provides an illustrative overview of Canada's strong and increasing economic relations with the U.S. — our neighbour and the world's most dynamic economy. These closer economic relations provide opportunities that can impact Canada's future growth and prosperity. Especially at a time of rapid globalization, the information revolution and the transition by all countries towards more knowledge-based activities, it is key that Canada take advantage of opportunities that promote Canada as an innovative and knowledge-based economy.

In this issue of the Micro-Economic Monitor we provide Part 1 — a snapshot of Canada's growing economic relations with the U.S., highlighting their many dimensions and key trends. It examines their increasing strength, and pays particular attention to the changing nature of our exports to the U.S.

Part 2 will be featured in the next issue of the Micro-Economic Monitor, and will detail the economic benefits of our growing economic relations with the U.S., exploring how we might better take advantage of economic opportunities in the U.S. It will also identify key challenges in pursuit of these opportunities.

As we approach the 21st century, our increasing economic relations with the U.S. are pivotal! Not only to better take advantage of attractive cross-border opportunities, but to be in better position to exploit new and emerging global opportunities — involving more value-added and knowledge-intensive activities that will be critically-important to Canada's future prosperity.

In making the transition to a more knowledge-based economy, we are moving from a world where natural resources provided important comparative advantages, to where innovation is now key.

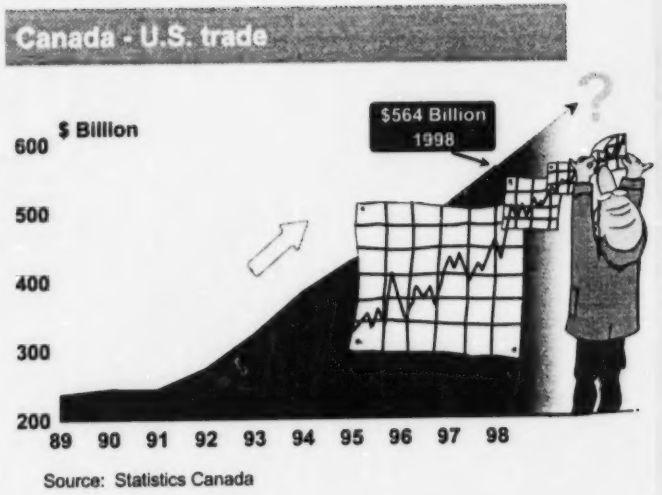
101-06589/

How fast-growing is our trade with the U.S.?

Our trade with the U.S. has <u>much</u> more than doubled...

Between 1989 and 1998, our total trade with the U.S. (exports plus imports) rose a spectacular 140%.

From $235 billion in 1989, it has soared to $564 billion in 1998.



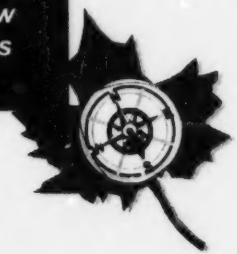
Canada - U.S. trade now exceeds a million dollars a minute!

L-1

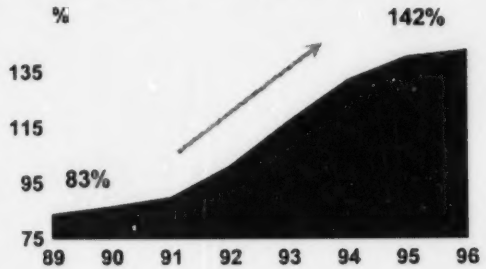
...far outpacing growth in interprovincial trade...

Canada's trade with the U.S. is growing much faster than interprovincial trade.

Due South — In 1989, our North-South trade with the U.S. was substantially less than our interprovincial trade, but now there is nearly one and a half times as much going to the U.S.



Ratio of Canada-U.S. trade to interprovincial trade



	1989	1996
	In $ Billion	
U.S. trade	*$235*	*$456*
Interprovincial trade	*$282*	*$320*

Source: Industry Canada compilations based on Statistics Canada data

...and our trade with all other G7 countries

While our trade with other countries has also increased, it has not risen nearly as fast as with the U.S.

For the U.S., the story is the same! American trade with Canada has outstripped U.S. trade with any other major industrial country.

The U.S. is by far our largest trade partner. But we are also the U.S.'s largest partner. We tend to forget this.

Canada's merchandise trade with the G7

U.S. merchandise trade with the G7

$ Billion

	Canada	Japan	Germany	U.K.	France	Italy
1998	$563.6	$266.9	$113.6	$109.4	$62.0	$33.1
1989	$235.2	$163.6	$49.6	$46.3	$29.2	$22.7
% Change	139.6	63.1	129.1	136.3	112.9	45.5

Source: Industry Canada compilations based on data from Statistics Canada and U.S. Dept. of Commerce

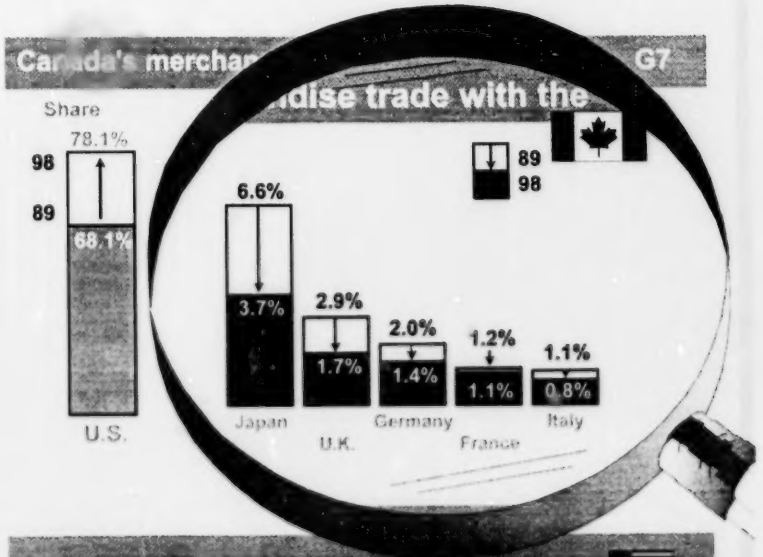
Indeed, our trade shares with other G7 countries are falling

Between 1989 and 1998, the share of Canada's trade with the U.S. increased by 10 percentage points, to reach almost 80% of our trade.

- **That is, we trade more than <u>four-times</u> as much with the U.S. than with all other countries <u>combined</u>!**

And only Canada, among the major industrial countries, saw its share of U.S. trade go up between 1989 and 1998.

Canada's trade shares with many other major countries have declined. Our second-largest trading partner, Japan, comprises less than 4% of our total trade.



U.S. merchandise trade with the G7

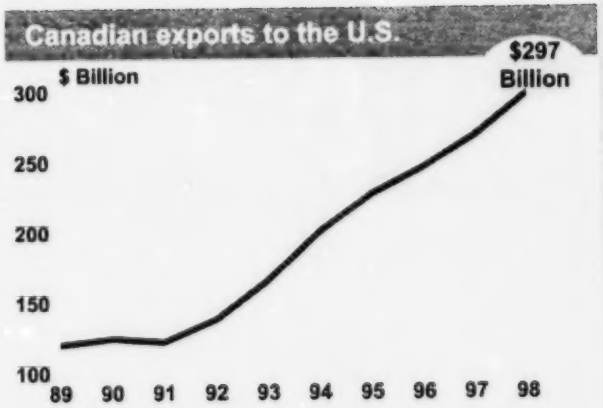
Share	Canada	Japan	Germany	U.K.	France	Italy
1998	20.6%	11.3%	4.8%	4.6%	2.6%	1.4%
1989	19.9%	16.5%	5.0%	4.6%	2.9%	2.3%
% Change	0.7	-5.2	-0.2	0.0	-0.3	-0.9

Source: Industry Canada compilations based on data from Statistics Canada and U.S. Dept. of Commerce. Trade data to the U.S. may reflect some export trans-shipments to other countries. Evidence suggests that the significance of this problem has not changed over time and trends should be unaffected. However, this phenomena should continue to be further researched.

Our exports to the U.S. are growing strong...

Today, $297 billion or 81% of all Canadian exports go to the U.S.

This accounts for over 33.5% of our GDP, a significant rise from only a few years ago.



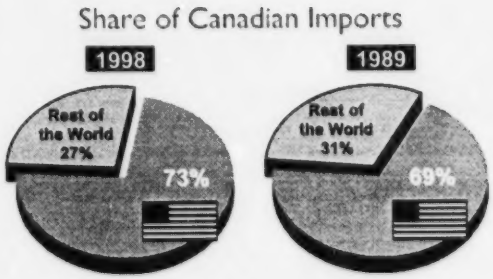
* Canadian exports to the U.S./Canada's GDP
Source: Statistics Canada

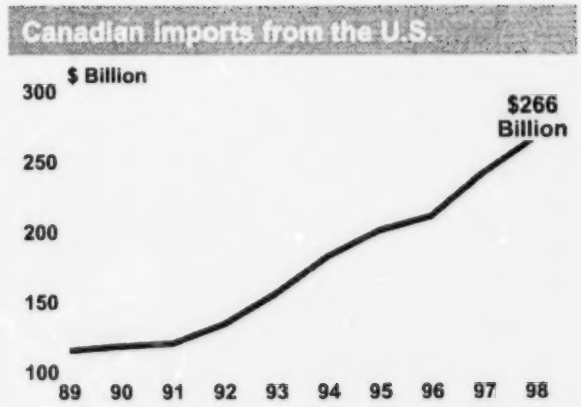
L-5

...as are Canada's imports from the U.S. ...

Similarly, 73% of all Canadian imports now come from the U.S.

These imports from the U.S. equal about 30% of Canada's total GDP.





* Canadian imports from the U.S./Canada's GDP
Source: Statistics Canada

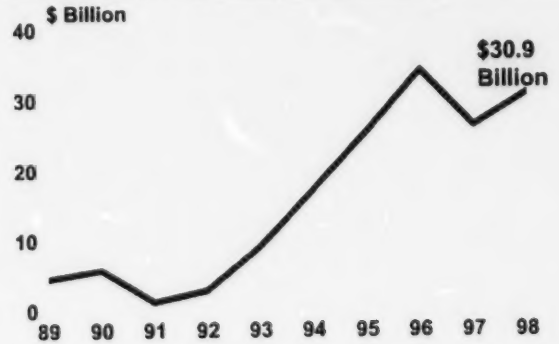
L-6

...contributing to a growing trade surplus

The dollar value of our exports to the U.S. is rising faster than our imports.

As a result, Canada has experienced a growing trade surplus.

Canada's trade surplus with the U.S.



Source: Statistics Canada

Canada's trade balance

$ Billion	1989	1998
World		
Imports	168.1	356.1
Exports	167.7	367.1
Balance	-0.4	11.0
U.S.		
Imports	115.4	266.4
Exports	119.6	297.2
Balance	4.4	30.9

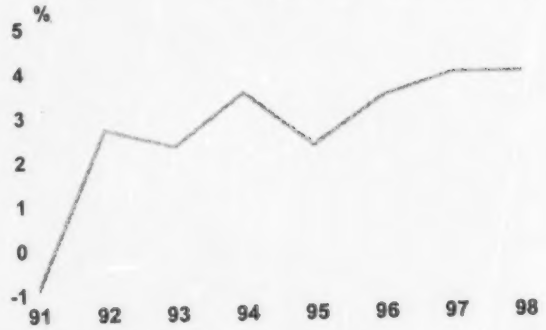
Source: Statistics Canada

Key factors include — the robust U.S. economy and our falling dollar...

The U.S. economy has displayed strong economic performance and growth during the 1990s.

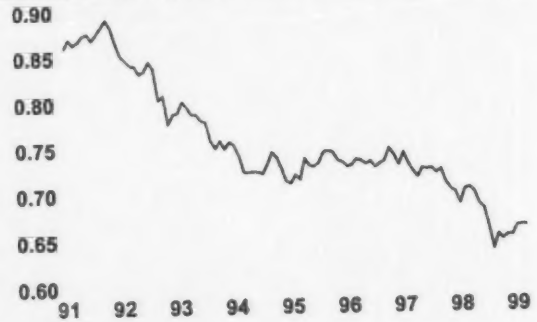
The Canadian dollar has depreciated from around 90¢ U.S. in 1992 to below 70¢ U.S. in 1998 and 1999 (67¢ U.S. in September 1999).

U.S. real GDP growth



Source: DRI

Canadian dollar



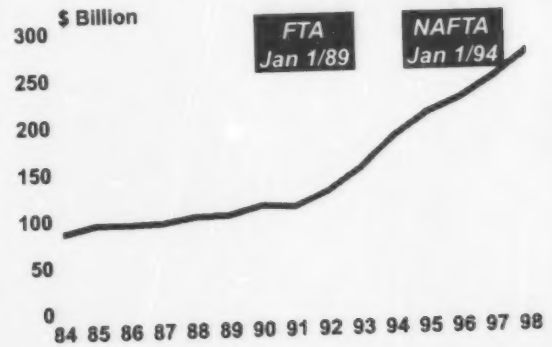
Source: Statistics Canada

...and, of course, the FTA and the NAFTA

Among other contributing factors to this fast increase in trade with the U.S. are the FTA and the NAFTA.

Since the signing of the FTA on Jan 1, 1989, virtually all tariff and many non-tariff barriers to trade in goods between the two countries have been eliminated. On Jan. 1, 1994, the NAFTA was signed — extending the FTA to important sectors such as trade in services, investment and government procurement. This helped set in motion a dynamic process that has resulted in even closer trading relationships between the two partners.

Canada exports to the U.S.



Growth in Canada - U.S. exports

	% Change
1984-89	18.7%
1989-94	48.3%
1994-98	48.1%

Note: Merchandise trade
Source: Industry Canada compilations based on Statistics Canada data

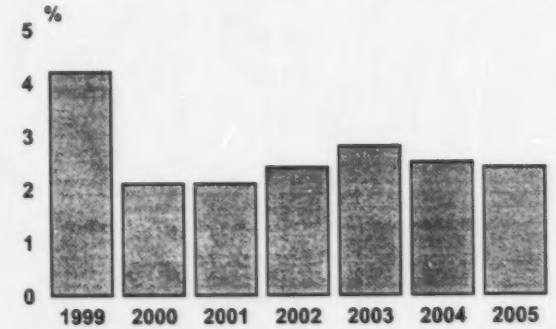
Our trade growth prospects are also promising

The forecast for the U.S. economy is for continuing solid growth.

And U.S. import demand is expected to grow even more strongly than the U.S. economy at large.

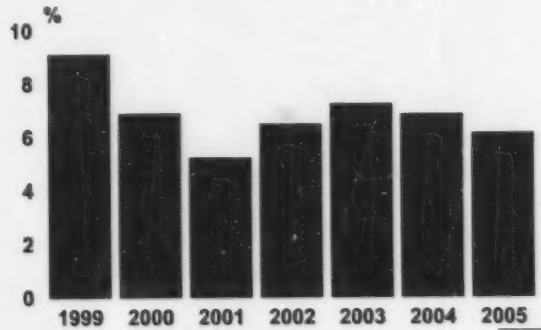
Consequently, Canadian exports to the U.S. should continue their robust growth.

Forecast of U.S. real GDP growth



Source: DRI (3rd Quarter 1999)

Forecast of U.S. import growth



Source: DRI (3rd Quarter 1999)

Are our U.S.-bound exports changing in nature?

Canada's key exports are in traditionally strong areas...

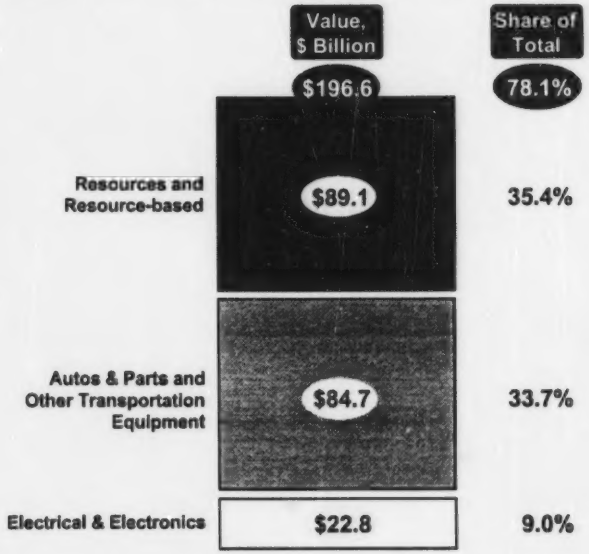
Canada is resource-rich, and our Resources and Resource-based products play a large role in our exports to the U.S.

Other top Canadian sectors for exports to the U.S. include Autos & Parts and Other Transportation Equipment, and Electrical & Electronics.

- **Together, these three sectors accounted for $196.6 billion or 78.1% of all Canada's merchandise exports to the U.S. in 1998.**

However, Canada's Transportation Equipment and Electrical & Electronics industries are also key export sectors.

Top exports to the U.S., 1998



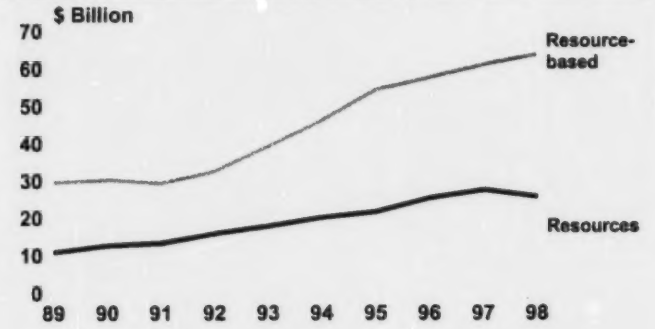
* Merchandise trade
Source: Industry Canada compilations based on Statistics Canada data

...namely in resources...

In the last ten years, our Resources & Resource-based exports to the U.S. have doubled, from around $40 billion in 1989 to almost $90 billion in 1998.

"Raw" exports comprise about one-third of our resource exports — the larger remaining share of our resource exports is actually made up of further processed resource-based products.

Resources and Resource-based exports to the U.S.



Selected sub-industries, exports to the U.S.

	Value $ Billion 1998	Average Annual Growth 1989-98
Resources	**25.5**	**10.1**
Oil & Gas	17.6	9.9
Agriculture	4.5	14.5
Mining	2.4	5.5
Fishing & Trapping	0.9	9.3
Logging	0.2	13.1
Resource-based	**63.6**	**9.0**
Paper	16.6	5.7
Primary Metals	15.2	7.3
Wood	14.9	13.9
Food	8.5	14.1
Petroleum & Coal	4.1	6.9
Non-Metallic Minerals	2.7	12.1
Beverage	1.2	8.8
Other (Leather & Tobacco)	0.4	10.1

Source: Industry Canada compilations based on Statistics Canada data

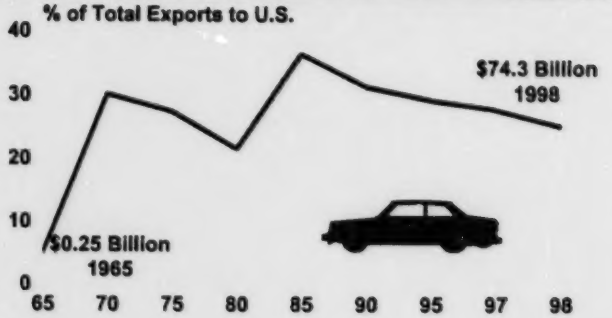
...and in autos...

Autos & Parts have been prominent in our cross-border trade and exports with the U.S. since the implementation of the Canada - U.S. Automobile Products Agreement (Auto Pact) in 1965.

The Canadian auto sector is an integral part of the North American market.

The move to a single continental market largely began with the signing of the Auto Pact in 1965, which removed import tariffs on auto production and led to major investments and cross-border trade by General Motors, Ford and Chrysler.

Autos & Parts exports to the U.S.



Selected sub-industries exports to the U.S.

	Value $ Billion, 1998	Average Annual Growth 1989-98
Transportation Equipment	**84.7**	**9.7%**
Autos & Parts	**74.3**	**9.2%**
Aircraft & Parts	**6.7**	**12.5%**
Railroad Rolling Stock	**2.0**	**14.4%**
Ship & Boat Building	**0.5**	**19.4%**
Other Transportation Equipment	**1.1**	**11.3%**

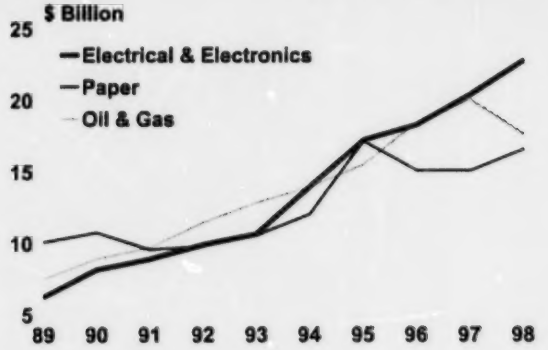
Source: Industry Canada compilations based on Statistics Canada data

...and in Electrical & Electronics industries

Within the last decade, exports to the U.S. of Electrical & Electronics have increased into greater prominence than many of our major Resources and Resource-based product exports, on the basis of fast growth in segments related to information and communication technology.

The information revolution and growing importance of computers has resulted in the rise and prominence of Electrical & Electronics exports.

Electrical & Electronics exports to the U.S.



Selected sub-industries exports to the U.S.

	Value $ Billion, 1998	Average Annual Growth 1989-98
Total Electrical & Electronics	22.8	15.9%
Communications & Other Electronics	10.5	16.8%
Office, Store & Business Machines	6.6	13.2%
Industrial Electronic Equipment	2.5	17.9%
Consumer Appliances	1.0	21.8%
Other Electrical Products	1.9	16.5%

Source: Industry Canada compilations based on Statistics Canada data

We have comparative advantage in these sectors...

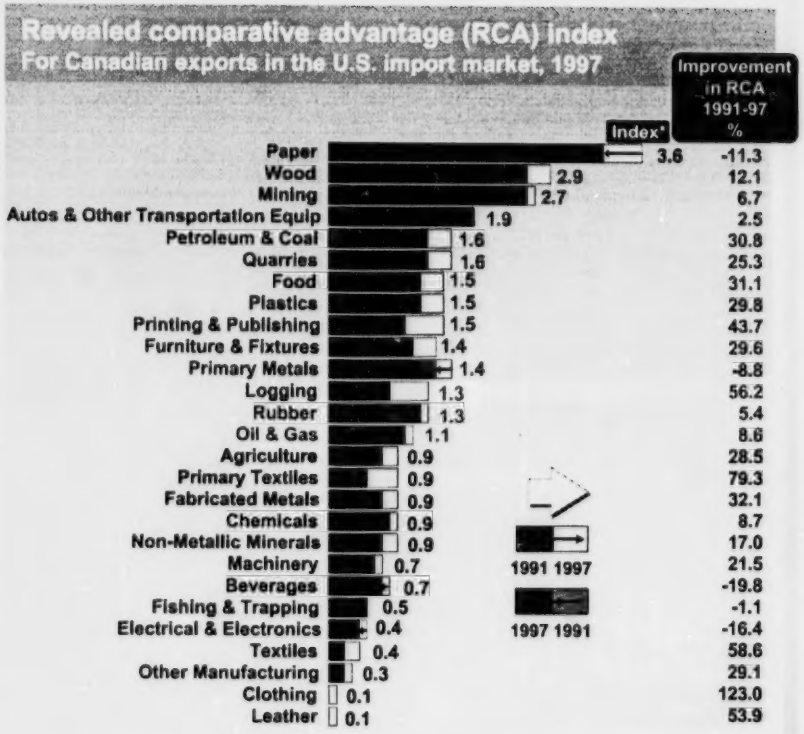
Recent figures show our comparative advantage is strengthening in most Resource & Resource-based industries, and in many other areas as well including Autos & Other Transportation Equipment.

It is noteworthy that while Canadian exports make up only a very small proportion of U.S. imports in subsectors such as clothing and leather industries, Canada's relative share is increasing fast.

- **This may reflect budding revealed comparative advantages in new manufacturing niches.**

In Electrical & Electronics, Canada faces strong competition from many other major and newly industrialized nations.

Revealed comparative advantage to the U.S. shows industries that provide a higher-than-average proportion of U.S. industry imports.



** Canada's share of U.S. industry imports divided by Canada's share of U.S. total imports*

1.0 = Canadian share of U.S. import market for all industries

An industry value greater than 1.0 indicates Canada's exports from that industry comprises a higher than average share of the U.S. import market, and a revealed comparative advantage.

Source: Industry Canada compilations based on Statistics Canada data

M-5

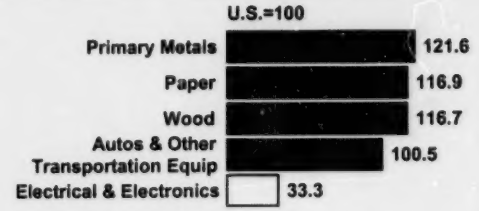
...as well as higher productivity relative to the U.S.

Canada was more productive than the U.S. in 1996 in Transportation Equipment and in three of our key resource-based exports:

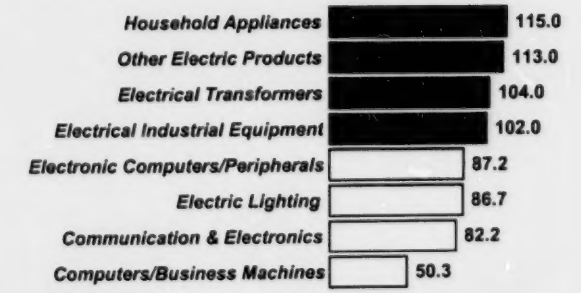
- **Primary Metal**
- **Paper**
- **Wood**

We are not as productive in overall Electrical & Electronics, but we appear to be relatively more productive in several areas within this sector — including in Household Appliances, Electrical Transformers and Electrical Industrial Equipment.

Canada-U.S. productivity gap *
Manufacturing, 1996



Canada-U.S. value-added per employee**
Electrical & Electronics, 1996



* GDP per worker (U.S. GDP at market prices is converted to GDP at factor cost to make it comparable to Canadian data)
** Manufacturing value-added/ manufacturing census employment
Note: Record Players, Radio and T.V. excluded
Source: OECD STAN Database and industry PPPs from Dirk Pilat, "Labour Productivity Levels in OECD Countries: Estimates for Manufacturing and Selected Services Sectors," OECD Working Paper, No. 86, 1996

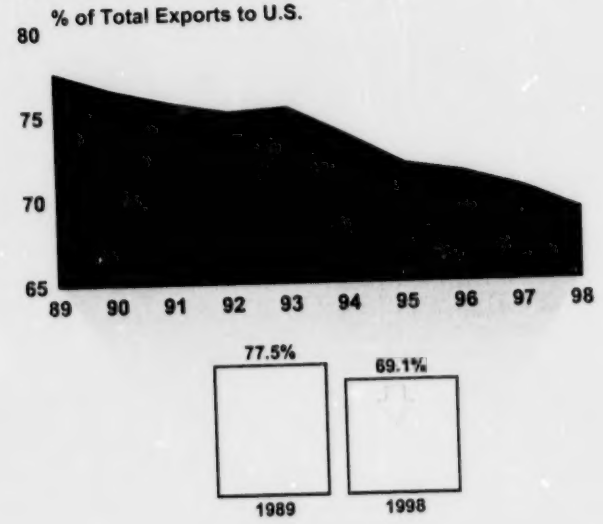
But these sectors' share of total exports to the U.S. is falling!...

While Resources and Resource-based Products, and Autos & Other Transportation Equipment, are still our strongest export industries to the U.S., their share as a proportion of our total exports to the U.S. has been actually declining.

- **In 1989, they comprised 77.0% of Canada's merchandise exports, but by 1998 their share dropped to 69.1%.**

However important autos and resources are to the overall strength of our exports, other industries are also growing, and quickly — making their own growing contribution to the rapid rise in Canada's exports to the U.S.

Share of Exports to the U.S.
Resources* & Resource-based Products; Autos & Other Transportation Equipment**



* Agriculture and Other Primary Industries
** Food, Beverage, Tobacco, Leather, Wood, Paper, Primary Metals, Non-Metallic Mineral, Refined Petroleum & Coal and Transportation Equipment.
Note: Merchandise trade
Source: Industry Canada compilations based on Statistics Canada data

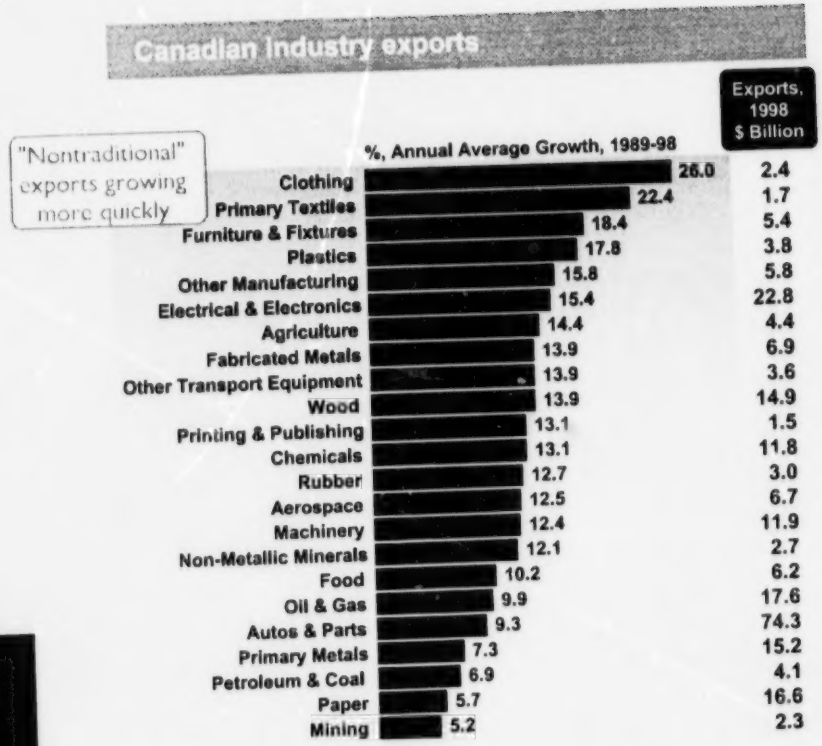
...because other Canadian exports are growing even quicker!

Our fastest growing exports span the "less traditional"

While our large traditional exports continue to grow, exports from many other sectors are growing more quickly.

They include Clothing & Textiles, Furniture & Fixtures, Plastics and Other Manufacturing.

Several of Canada's fastest-growing exports are from industries which historically were relatively small exporters.



* Merchandise industry exports of at least $1 billion in 1998
Source: Industry Canada compilations based on Statistics Canada data

While they include some high-knowledge activities...

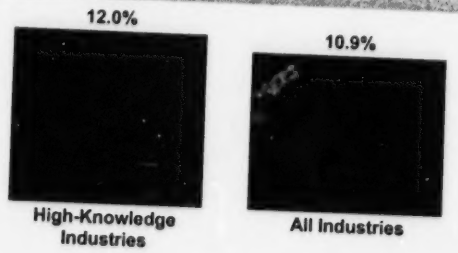
Indeed, these higher knowledge industries are increasing their exports to the U.S. at a slightly faster than average rate.

Exports from such high-knowledge industries include —

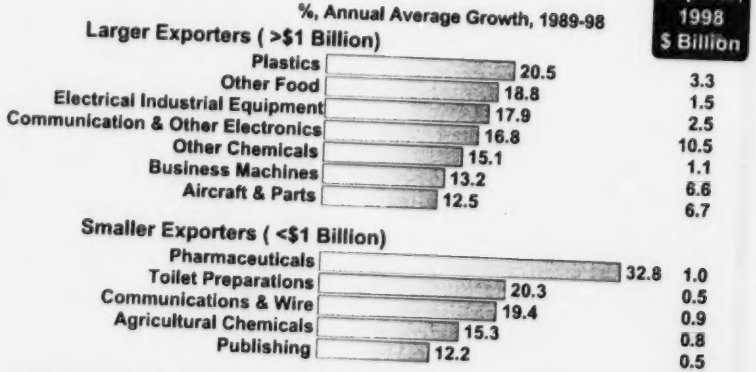
- **Pharmaceuticals**
- **Plastics**
- **Communication & Electronic Equipment**
- **Electrical Industrial Equipment**

Canada is increasingly making itself known as a home to important knowledge-intensive industries.

Growth in exports to the U.S. by knowledge intensity*, 1989-1998



Fastest-growing high-knowledge** exports


%, Annual Average Growth, 1989-98
Exports, 1998 $ Billion
Larger Exporters (>$1 Billion)
Plastics 20.5 3.3
Other Food 18.8 1.5
Electrical Industrial Equipment 17.9 2.5
Communication & Other Electronics 16.8 10.5
Other Chemicals 15.1 1.1
Business Machines 13.2 6.6
Aircraft & Parts 12.5 6.7
Smaller Exporters (<$1 Billion)
Pharmaceuticals 32.8 1.0
Toilet Preparations 20.3 0.5
Communications & Wire 19.4 0.9
Agricultural Chemicals 15.3 0.8
Publishing 12.2 0.5

* Calculated as the ratio of university-educated employees to total employees, goods producing sector.
** Industries (3-digit SIC) with more than $500 million in exports in 1998
Source: Industry Canada compilations based on Statistics Canada data

...and innovative industries...

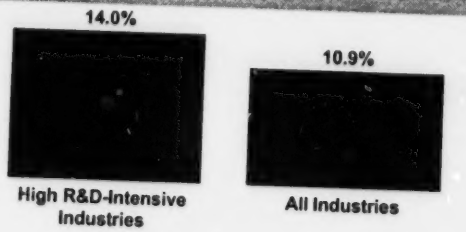
Innovative industries, as measured by their propensity to undertake R&D, are increasing their exports to the U.S. at a very fast clip.

Among the top innovative industries are Pharmaceuticals, Industrial Electrical Equipment, Machinery, Aircraft & Parts and Telecommunication equipment.

They also include smaller exporters of Man-made Yarn and Agricultural Chemicals.

Our future prosperity depends on faster innovation, and in fostering new and better products and services.

Growth in exports by R&D-intensity*, 1989-1998



Fastest-growing R&D-intensive** exports

	%, Annual Average Growth, 1989-98	Exports, 1998 $ Billion
Larger Exporters (>$1 Billion)		
Plastic & Synthetic Resin	20.5	3.3
Electrical Industrial Equip	17.9	2.5
Communication & Other Electronics	16.8	10.5
Other Chemicals	15.1	1.1
Railroad Rolling Stock	14.4	2.0
Other Machinery & Equipment	14.0	10.4
Business Machine	13.2	6.6
Aircraft & Parts	12.5	6.7
Smaller Exporters (<$1 Billion)		
Pharmaceuticals	32.8	1.0
Communications & Energy Wire & Cable	19.4	0.9
Man-made Fibre & Filament Yarn	17.5	0.7
Agricultural Chemicals	15.3	0.8
Other Electrical	11.4	0.6

* Calculated as R&D spending / sales
** Industries (2 and 3-digit SIC) with more than $500 million in exports in 1998.
Source: Industry Canada compilations based on Statistics Canada data

...our fast-growing exports reflect many industries' successful shift to a "North American" orientation

The U.S. market is becoming increasingly important to almost all industries in the present 1991-98 upswing.

In many industries, the U.S. market is growing considerably faster than the Canadian market, contributing to export growth and the increasing U.S. orientation of our industries.

For several Canadian industries, the U.S. market is relatively more important than the Canadian market.

Select fast-growing export industries

	Growth in Canadian Market 1991-97	Growth in U.S. Market 1991-97	Difference in Growth Rates of Markets 1991-97	Trade Orientation to U.S.	
				Growth 1991-97	1997 Value
	% Change			% Change	
Furniture & Fixtures	-2.2	11.7	13.9	121.0	69.6
Non-Metallic Minerals	2.5	10.7	8.2	113.9	30.8
Clothing	1.2	7.6	6.4	366.7	28.0
Wood	6.5	12.7	6.2	62.4	51.0
Electric & Electronics	9.0	14.4	5.4	51.6	69.3
Printing & Publishing	3.0	7.5	4.5	159.4	8.3
Fabricated Metals	6.0	9.3	3.3	98.4	25.4
Petroleum & Coal	2.0	4.9	2.9	59.0	27.5
Plastics	7.7	10.5	2.8	87.5	33.0
Food	4.2	5.2	1.0	75.3	14.2
Other Manufacturing	6.7	7.7	1.0	114.4	60.9
Chemicals	7.4	8.2	0.8	93.4	37.9
Primary Textiles	6.9	7.3	0.4	130.6	36.9
Rubber	8.6	8.8	0.2	46.1	63.7
Paper	7.2	7.1	-0.1	8.1	49.3
Machinery	12.0	11.9	-0.1	46.2	55.4
Primary Metals	11.6	9.5	-2.1	28.4	52.9
Transportation Equipment	12.6	9.3	-3.3	-0.1	73.6

Industries more dependent on U.S. than Canadian markets

Trade Orientation to U.S.: Canadian exports to U.S. divided by Canadian Shipments

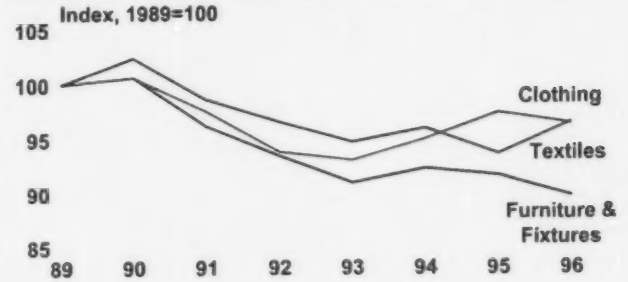
Source: Industry Canada compilations based on Statistics Canada data and U.S. Department of Commerce data.

For many Canadian industries, this has meant a refocussing...

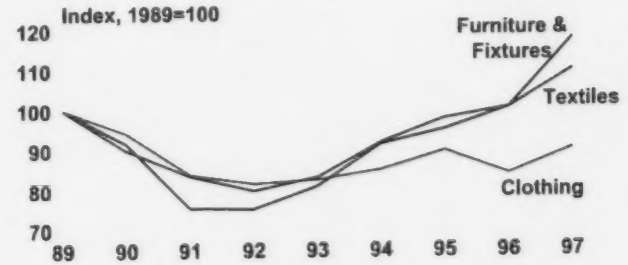
Some industries underwent considerable adjustment. In many of these cases, there was, over a number of years, an associated shake-out of weaker operations.

But the survivors who restructured and re-oriented activities to take advantage of the broader North American market have done well.

Number of firms — Select Industries



Output — Select Industries

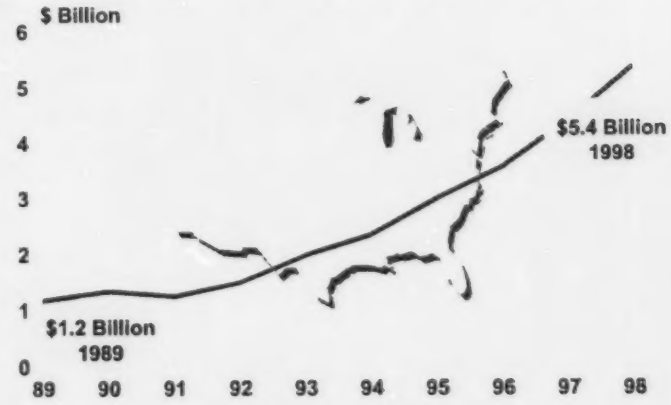


Source: Industry Canada compilations based on Statistics Canada data

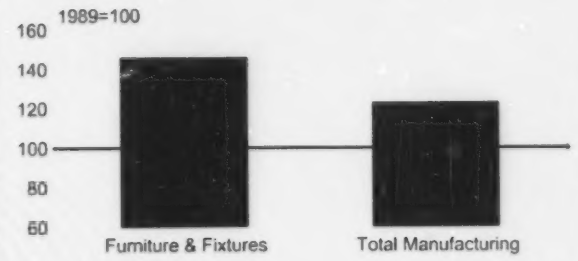
...greater specialization...

For instance, the Furniture industry invested heavily in M&E, and increased its productivity — and saw its exports to the U.S. increase dramatically in the 1990s.

Furniture industry exports to the U.S.

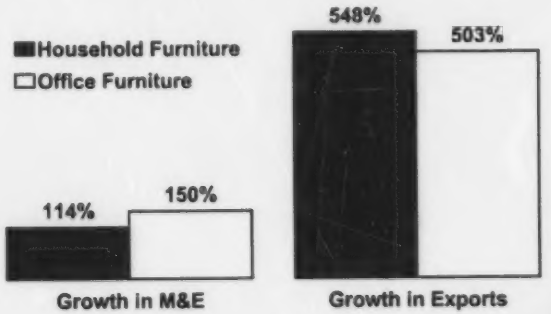


Average output per employee, 1997



Source: Statistics Canada

Growth in M&E and exports to the U.S., 1989-1998



Source: Statistics Canada

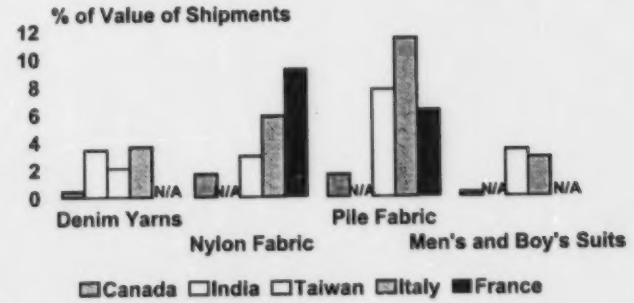
...and the pursuit of niches

Textiles productivity improved considerably during the 1990s. And Clothing has benefitted from niche selling into the growing U.S. market.

Key advantages for Canadian producers selling in the U.S. market versus other international competitors include our proximity plus the fact that other countries still face U.S. tariffs.

The FTA and the NAFTA have benefitted our industries by providing free access to a large market.

Transportation and insurance costs to U.S. in select Clothing & Textile items



Source: Industry Canada compilations based on data from U.S. Dept. of Commerce

U.S. Tariffs* on select Clothing & Textile items

	Most favoured nations	
Lady's Cotton Sweater	18.6%	0%
Lady's Polyester Sweater	33.1%	0%
Baby's Cotton Knitted Sweater	18.0%	0%
Baby's Cotton Knitted Dress	11.8%	0%
Boy's Jeans	17.2%	0%
Roll of Spun Yarn for Wholesale	10.2%	0%
Man's Wool Suit	19.2%	0%

* Quotas also play an important role in restricting imports. These product niches may face future multilateral protection reductions.

Source: U.S. Customs Office

Canada's services exports are also increasing...

Service industries are feeling the effects of globalization and the information revolution, and are becoming much more tradeable.

As with merchandise trade, the U.S. is the dominant destination of Canada's services exports — and they are increasing fast.

Commercial services, which include many industries essential to an increasingly knowledge-based economy (e.g. telecommunications, finance, engineering and business services), constitute a large part of our services exports and imports with the U.S.

Canada-U.S. trade in services

Service exports to the U.S. by type

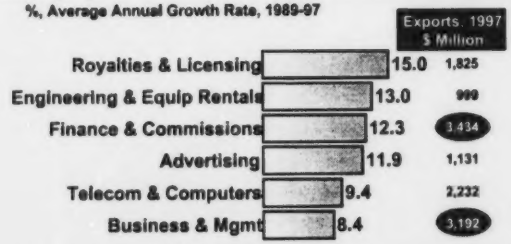
$ Billion	1989	1998	% Change 1989-98
*Commercial Services**	5.5	14.2	158.2
Travel	4.1	8.7	112.2
Transportation	1.9	4.8	152.6

Service imports from the U.S. by type

$ Billion	1989	1998	% Change 1989-98
*Commercial Services**	8.7	17.5	101.1
Travel	6.7	15.8	81.6
Transportation	2.4	5.1	112.5

* Commercial Services include minute trade in Government Services.

Commercial services exports to U.S.



Source: Industry Canada compilations based on Statistics Canada data

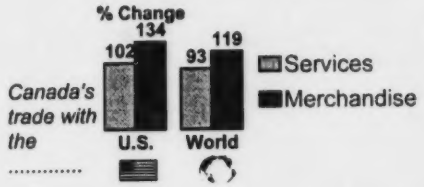
...albeit not as fast as merchandise trade

The growth in Canadian services trade have lagged behind that for merchandise trade.

Canada's export growth in services is also considerably lower than that for the U.S. and the world.

Canada's export of services grew about 31% slower than for merchandise products, and about 80% slower than U.S. services exports.

Growth in Canadian Trade, 1989-98

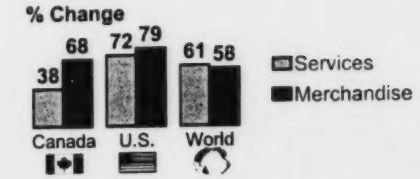


$ Billion

	1989	1998	% Change 1989-98
Imports	18.1	32.6	80.3
Exports	11.8	27.7	134.7

Source: Statistics Canada

Growth in Trade



Source: World Trade Organisation

Intra-industry trade is increasing...

Our trade with the U.S., while reflecting greater industry specialization and comparative advantage, is resulting in more intra-industry or two-way trade flows within industries.

- **A number of industries, such as Rubber, Food, Plastics and Fabricated Metals display considerable intra-industry trade.**

* Intra-industry trade is measured as (1-|Exports-Imports|/(Exports+Imports))*100. A value of 100 indicates balanced international trade at the industry level, while a value of 0 indicates that trade is one-way.
Source: Industry Canada compilations based on Statistics Canada data.

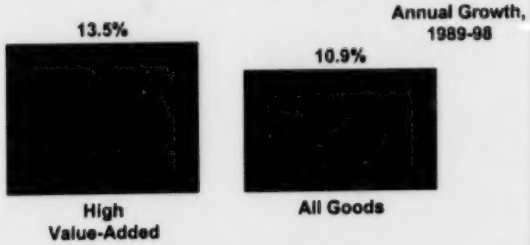
...especially in high value-added activities

Canada's intra-industry merchandise trade with the U.S. is growing more rapidly among higher value-added industries.

So too, are Canada's exports to the U.S., which are increasingly reflecting higher value-added activities.

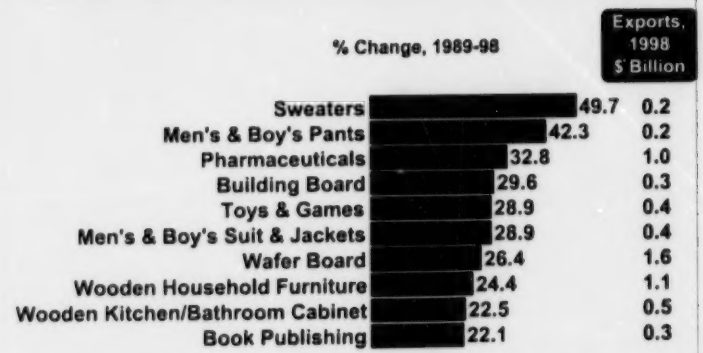
Intra-industry trade with the U.S. by value-added*

Exports to the U.S. by value-added*



* Calculated as value-added/shipments, manufacturing sector
Source: Industry Canada compilations based on Statistics Canada data

Fast-growing, high value-added exports* to the U.S.


% Change, 1989-98
Exports, 1998 $ Billion
Sweaters 49.7 0.2
Men's & Boy's Pants 42.3 0.2
Pharmaceuticals 32.8 1.0
Building Board 29.6 0.3
Toys & Games 28.9 0.4
Men's & Boy's Suit & Jackets 28.9 0.4
Wafer Board 26.4 1.6
Wooden Household Furniture 24.4 1.1
Wooden Kitchen/Bathroom Cabinet 22.5 0.5
Book Publishing 22.1 0.3

* Industries (4 digit SIC) with $200 million or more in exports in 1998.
Source: Industry Canada compilations based on Statistics Canada data

Globalization and the information revolution are spurring movement into higher value-added endeavours.

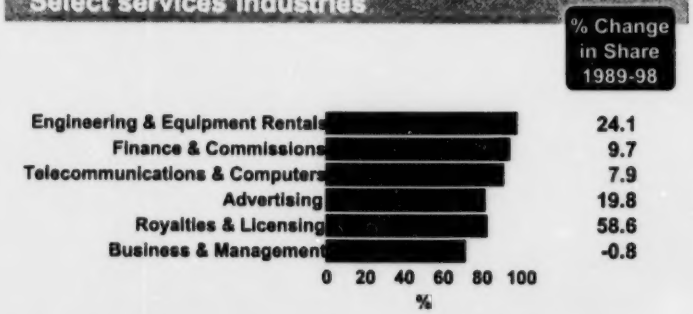
...and in commercial services

Intra-industry trade in services is most significant in Engineering & Equipment Rentals and in Telecommunication & Computers.

Commercial services include industries at the heart of the innovation system, that are key to global business — namely financial services and business management.

Commercial Services have been undergoing rapid transformation — driven by innovative products, advanced technologies, and increased competition.

Share of trade which is intra-industry*, 1998
Select services industries



* Intra-industry trade is measured as (1-|Exports-Imports|/(Exports+Imports))*100. A value of 100 indicates balanced international trade at the industry level, while a value of 0 indicates that trade is one-way.
Source: Industry Canada compilations based on Statistics Canada data.

A major element of intra-industry trade is intra-firm trade

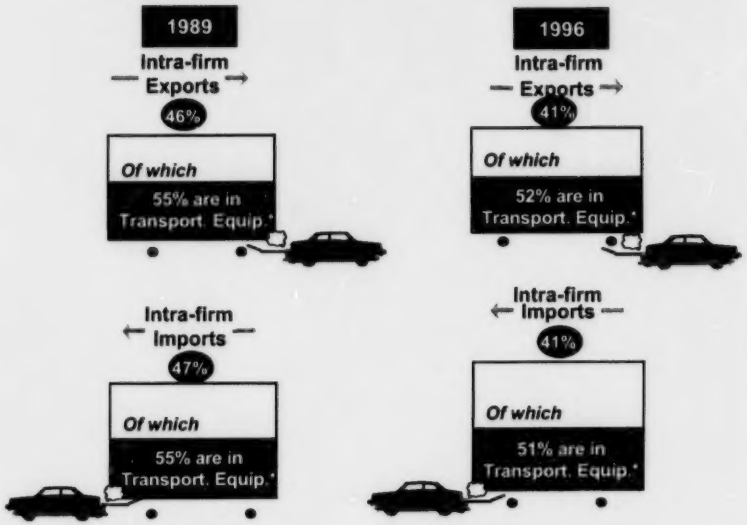
Close to half of all our trade with the U.S. involves intra-firm activities. In 1996, slightly more that half of our intra-firm trade involved transportation equipment, primarily automobiles and parts.

Although intra-firm trade has grown substantially in dollar value, it has not kept pace with the growth in total trade.

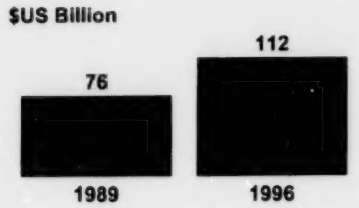
Consequently, the share of total trade conducted on an intra-industry basis has declined. Also, the share of intra-industry trade carried out on an intra-firm basis has fallen.

Intra-firm trade refers to international trade in products and services which stay within a MNE. The trade patterns of U.S.-controlled firms underscore the strong link between trade and foreign direct investment.

Intra-firm trade between Canadian and U.S. firms
As a proportion of total Canada-U.S. trade



Intra-firm trade between Canadian and U.S. firms



* Excludes trade of U.S. affiliates of Canadian MNEs
Source: Industry Canada compilations based on U.S. Department of Commerce data.

Where do we export in the U.S.?

While we export <u>mostly</u> to the northern-most states...

A substantial portion of our exports to the U.S. goes to the northern-most states, which includes states around the Great Lakes and between the Ohio and Mississippi Rivers.

- **Michigan alone receives 22% of our exports, but 77% of this is related to the automotive industry.**

When our exports are compared to the size of individual states' economies, it can be seen that our exports to Vermont equal more than a quarter of their output. Michigan and North Dakota are also among our top trading partners.

Northern U.S. markets are within easy travelling distance of all major Canadian urban centres.

Canadian exports to the U.S. states as a percent of GSP by state, 1996

0-1 (Low) 1.5-3.0 (Med-high)
1-1.5 (Med-low) 3.0+ (High)

* GSP is Gross State Product
Source: Industry Canada compilations based on Statistics Canada and the U.S. Dept. of Commerce data

Select U.S. Markets

	Exports/GSP 1996, %	Exports 1998, $ Billion
Vermont	**26.5 (1)**	5.6 (12)
Michigan	**15.7 (2)**	59.5 (1)
North Dakota	**7.2 (3)**	1.5 (32)
Maine	**5.7 (4)**	2.6 (24)
Montana	**5.2 (5)**	1.7 (30)
New York	2.6 (11)	34.1 (2)
California	0.8 (41)	15.6 (3)
Illinois	2.3 (14)	14.3 (4)
Ohio	2.5 (12)	13.0 (5)

Source: Statistics Canada and the U.S. Dept of Commerce

...we are broadening our exports quickly to other states, too...

More and more of our Canadian exports are headed further south.

- **States which are "further away" realized a 6.2 percentage point increase in Canadian imports between 1989-98.**

While most of our exports go to neighbouring states, we are making in-roads in U.S. markets that are further away.

% of exports to U.S. states

	89	98
Neighbouring	70.1%	63.4%
Near-by	13.7%	14.2%
Further away	16.2%	22.4%

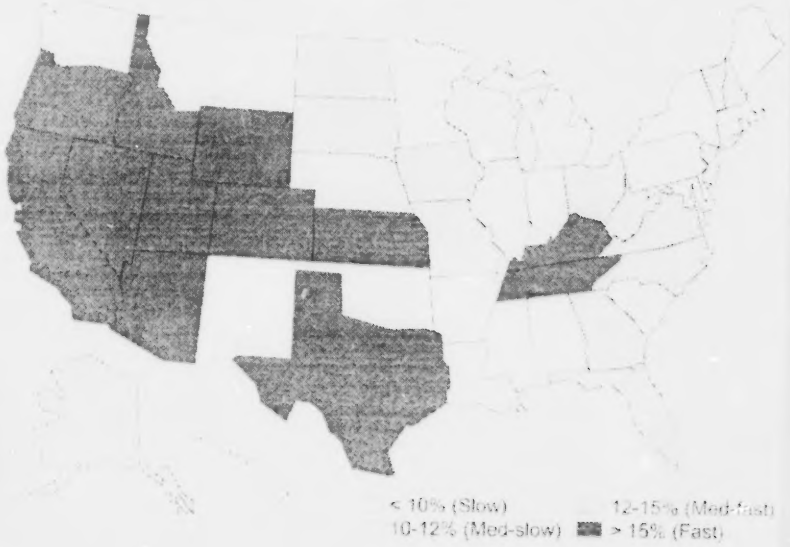
Source: Industry Canada compilations based on Statistics Canada data

...especially in the southwest

In fact, some of our highest export growth is in markets in the west and southwest.

The west and southwest are fast-growing U.S. regions, and are providing expanding markets for our exports.

Average annual growth in exports to U.S. states, 1989-98



Source: Industry Canada compilations based on Statistics Canada data

Key exports vary by U.S. region...

Our resources and resource-based products, such as Oil & Gas and Wood Products (Sawmill & Planing Mill) are among the top exports in a majority of U.S. markets.

Our motor vehicles exports are mainly destined to the mid-west, Middle Atlantic and Pacific regions of the U.S.

Aerospace, Computers & Peripherals and Electronic Parts are now top exports in a number of markets.

Top 3 Canadian exports by U.S. region*, 1999

Goods Producing Industries

- Cattle Farms
- Sawmill and Planing Mill Products
- Other Primary Smelting and Refining
- Aircraft and Aircraft Parts Industry
- Computing and Peripheral Equipment
- Motor Vehicle
- Motor Vehicle Engine and Engine Parts
- Conventional Crude Oil and Natural Gas
- Refined Petroleum Products
- Electronic Parts and Components

Source: Industry Canada calculations based on Statistics Canada data

...but all U.S. regions are importing higher value-added products

Higher value-added products are growing rapidly, although low value-added exports comprise a larger share of our total exports.

An increasing proportion of our high value-added and high-knowledge products are also being exported to more southern destinations in the U.S.

We are witnessing a shift toward value-added exports which is stronger to the southern U.S.

Growth in value-added exports, 1989-98

	% of exports to the U.S.						Degree of export orientation*	
	Neighbouring		*Near-by*		*Further away*			
	89	98	89	98	89	98	89	96
Value-Added								
High	46%	22%	18%	29%	34%	50%	13.7%	27.4% ↑
Low	79%	72%	11%	11%	10%	17%	27.4%	38.0%
Knowledge-Intensity								
High	64%	59%	14%	15%	22%	27%	18.7%	35.3% ↑
Low	54%	52%	25%	21%	21%	27%	14.6%	29.9%

* Ratio of Canadian exports to the U.S., to Canadian GDP
Source: Industry Canada compilations based on Statistics Canada data

Investment and R&D

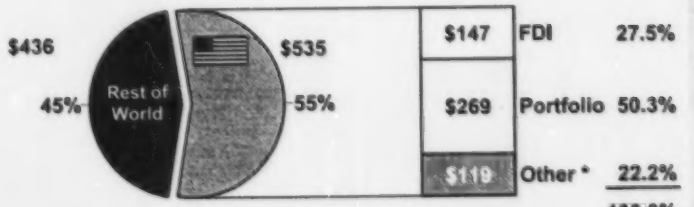
The U.S. is our most important foreign investor...

The U.S. is our dominant source of foreign capital — accounting for more than half (55%) of the foreign capital invested here in 1998.

- **About one-quarter of this is in the form of U.S. direct investment.**
- **In 1998, U.S. direct investment in Canada exceeded 67.7% of total foreign direct investment (FDI).**

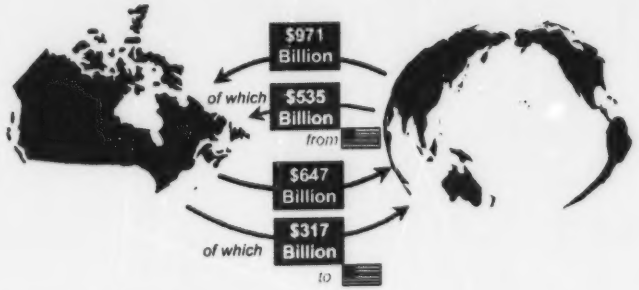
Foreign Investment position in Canada

1998 *in billions*



* Other investment includes loans & allowances, deposits, official international reserves, and other assets
Source: Statistics Canada

Foreign investors have invested $971 billion into Canada.



Source: Statistics Canada

Canadian companies and investors have invested $647 billion outside Canada.

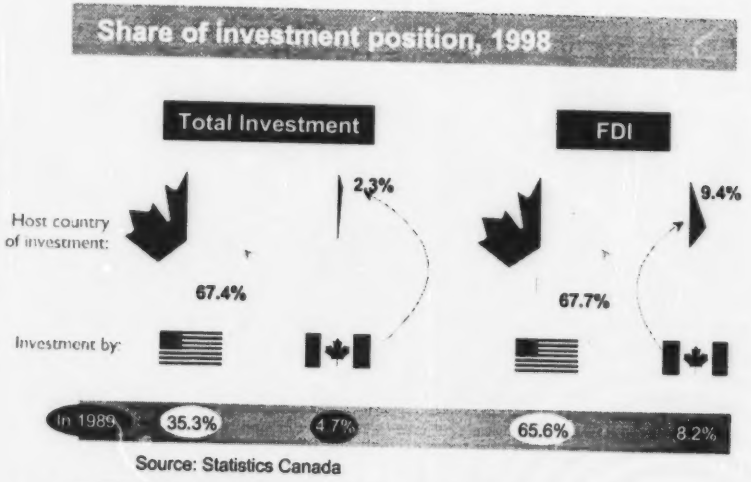
O-1

...who continues to increase their Canadian investment...

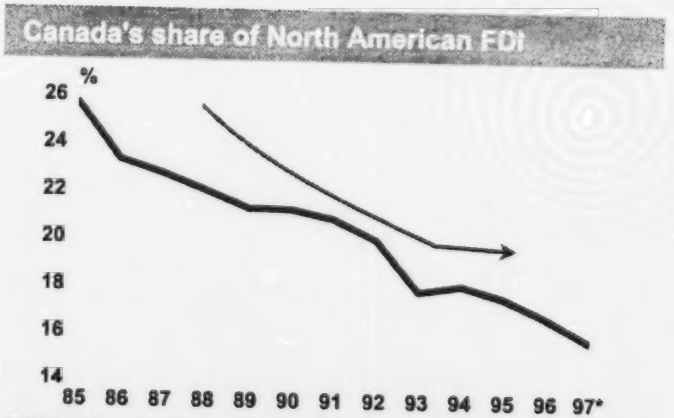
Canada continues to receive a growing percentage of its foreign capital from the U.S.

While North America (Canada plus the U.S.) has in general become relatively less attractive as a location for global FDI (compared to many overseas opportunities) Canada's share within the North American context has also been declining.

Canada's future success will depend on attracting FDI, and a key concern is how Canada might reverse its position as a relatively less attractive location than the U.S. for FDI.



Source: Statistics Canada



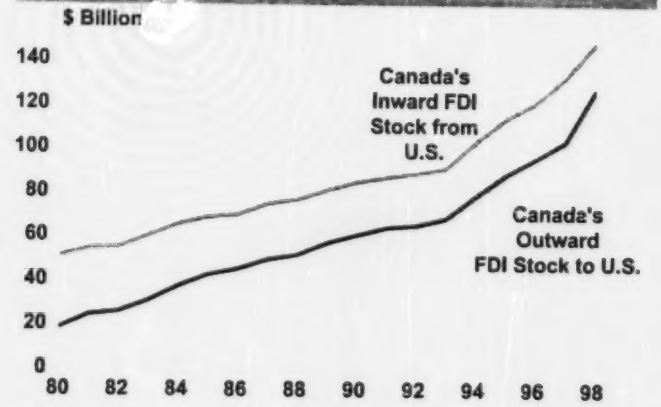
* 1997 Mexico data was unavailable therefore was replaced by 1996 Mexico data
Source: OECD

...especially in terms of FDI

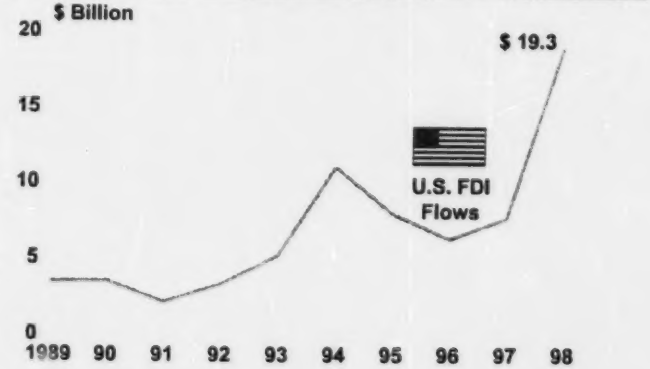
The accumulated "value" of U.S. FDI continues to rise, outweighing the stock of Canadian direct investment in the U.S.

U.S. FDI allows Canadian firms to undertake additional R&D, expand their production capacity, introduce new, more competitive products, and create more jobs.

Canada's inward and outward FDI stock



U.S. FDI flows to Canada



Source: Statistics Canada

O-3

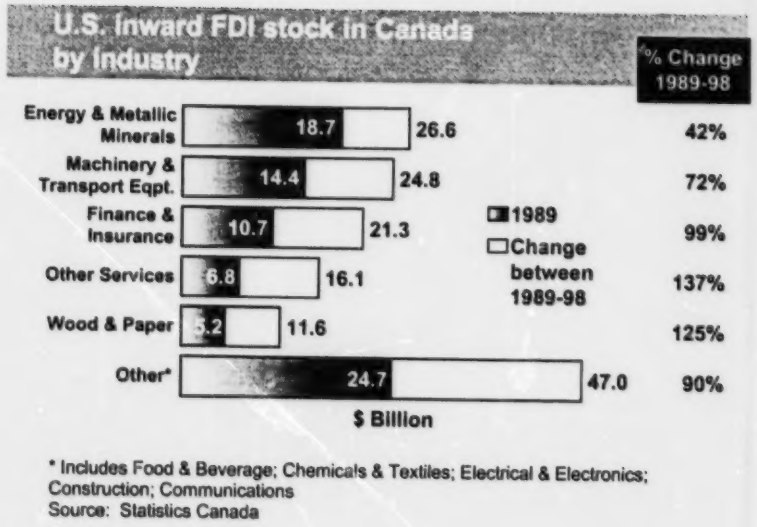
Indeed, FDI from the U.S. is playing a crucial role...

U.S. FDI is relatively larger in energy and mining, as well as in Machinery & Transportation Equipment.

It is increasing fast in Services activities, including in Finance & Insurance.

Between 1989 and 1998, there has also been a jump in U.S. FDI going into Wood & Paper.

Services industries, too, are attracting an increasing share of U.S. FDI.



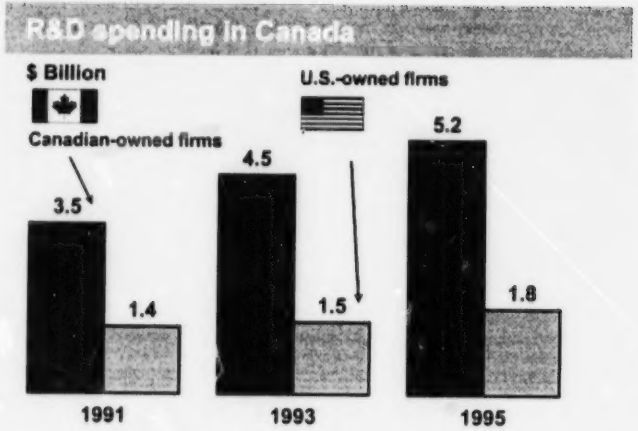
* Includes Food & Beverage; Chemicals & Textiles; Electrical & Electronics; Construction; Communications
Source: Statistics Canada

...including to help develop "knowledge" in Canada

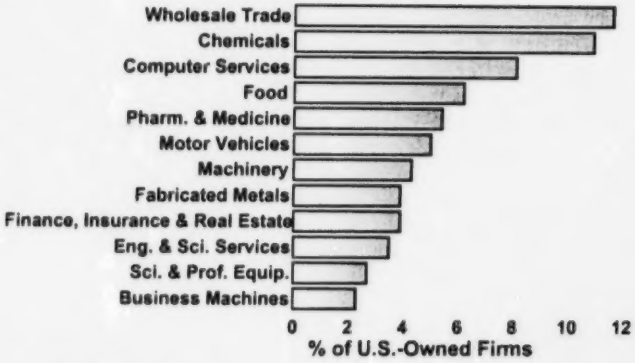
U.S. firms finance and perform substantial R&D in Canada — over 23% of total Canadian business sector R&D in 1995 was performed by U.S.-owned firms/affiliates.

- **In 1995, U.S. R&D spending in Canada increased by 18.7% — to almost $1.8 billion.**
- **This R&D spending was concentrated in industries such as Wholesale Trade, Chemicals and Computer Services.**

The essence of a KBE is that competition is, first and foremost, competition to innovate. But the costs of innovation are high.



Distribution of U.S.-owned firms performing R&D in Canada, 1995



Source: Statistics Canada

...and collaborative activities

There are strong R&D links between Canada and the U.S. In fact, there are well over 100 distinct Canada-U.S. arrangements that oversee nearly 500 collaborative research ventures.

Plus there are thousands of formal and informal arrangements among companies, universities and other institutions, individual researchers, etc. on both sides of the border.

These collaborative activities allow firms to acquire technology, keep abreast of technological developments, and use specialized skills available in each country.

Canadian and U.S. firms that sponsor research in each other's country can draw on the pool of skilled people and technology in the respective countries, and get earlier access to new ideas.

Canada is involved with helping to build the International Space Station. Canada will contribute a highly advanced version of the Canadarm — the Mobile Servicing System.

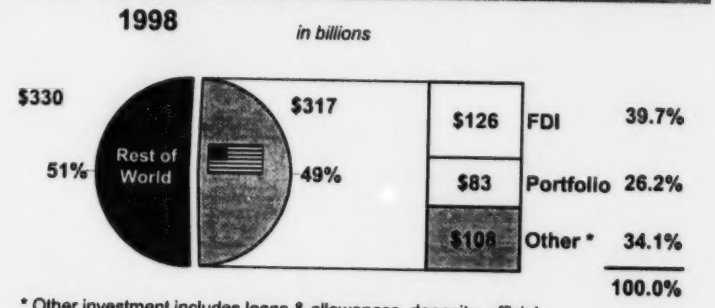
We are also investing more in the U.S. ...

About half of Canada's foreign investment position is in the U.S. A substantial part of this (almost 40%) is in the form of FDI.

In 1998, our FDI grew twice as fast as foreign and U.S. FDI in Canada.

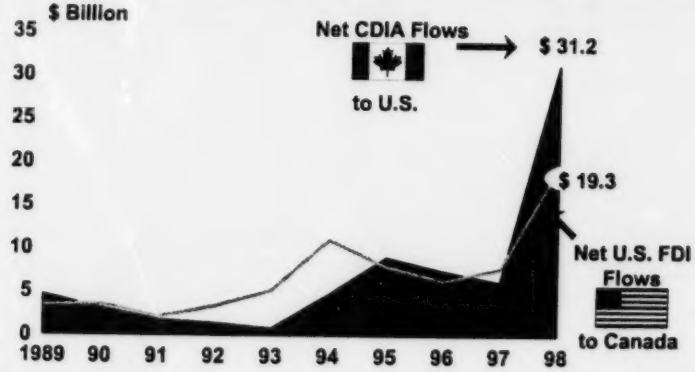
In 1998, Canadians put in much more direct investment into the U.S. than U.S. investors did into Canada.

Canadian investment position abroad



* Other investment includes loans & allowances, deposits, official international reserves, and other assets
Source: Statistics Canada

Net U.S. FDI flows to Canada and net CDIA flows to the U.S.



Source: Statistics Canada

...including plant and equipment in key areas...

Canadian companies are more than doubling their investments in key areas of the U.S. economy.

This includes expanding significantly their operations in Pharmaceuticals as well as in Business Services.

Property, plant and equipment are growing fastest in the North-east, the Heartland of the mid-west, the South-east, and in Nevada, Idaho and Washington.

Property, plant and equipment expenditures in the U.S. by Canadian companies

	1989	1996	Annual Growth Rate
	($ Million)		
Drugs	2	28	46%
Electrical components	2	5	14%
Electrical goods	2	5	14%
Business services	41	112	15%
Accounting, research and management	8	41	26%
Computer and data processing	19	96	26%

Source: U.S. Dept. of Commerce

Average annual growth of plant, property and equipment of Canadian companies in the U.S., 1989-96

Source: Industry Canada compilations based on U.S. Dept. of Commerce data

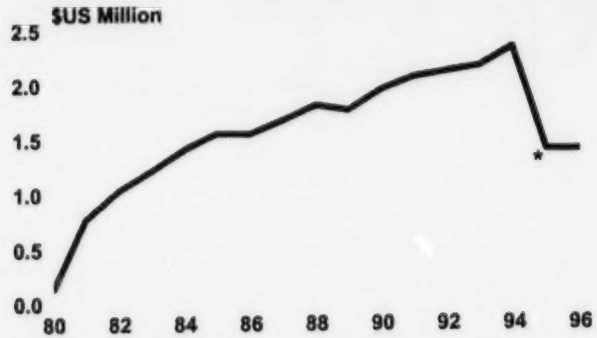
...and R&D...

Canadian companies are also setting up R&D facilities in the U.S.

- **While R&D leads to the creation of new technologies, investment is the main vehicle through which these technologies become incorporated in the productive process.**

The integration of the North American economy has given rise to an emerging R&D infrastructure. Companies on either side of the border draw on the resources of both countries to aid in product and process innovation. This gives each economy an important international edge.

R&D spending by Canadian affiliates in the U.S.



* Decline in 1995 reflects sale of an equity position in a large U.S. chemical company
Source: U.S. Dept. of Commerce

Canadian company R&D facilities in U.S., 1996

Computers	5
Software	2
Telecommunications	7
HDTV, Other Electronics	1
Chemicals, Rubber	4
Metals	2
Machinery	1
Instrumentation, Medical Devices	2
Food, Consumer Goods	4

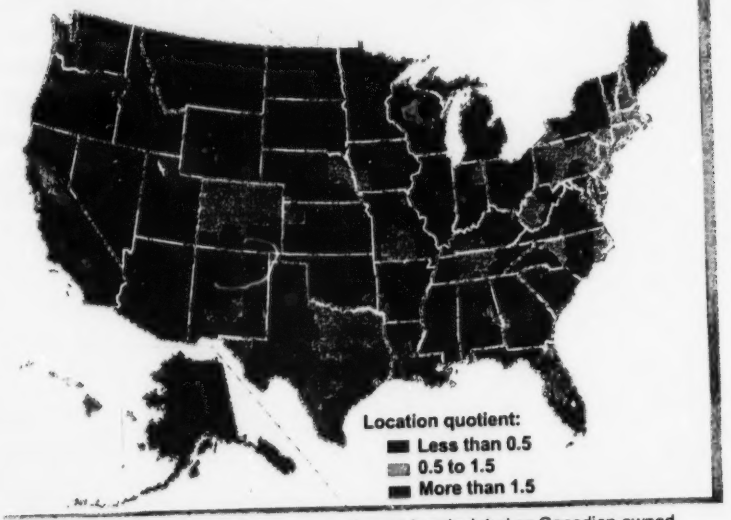
Source: D.H. Dalton and M.G. Serapio, Jr., *Globalizing Industrial Research and Development* (Washington, DC: U.S. Department of Commerce, Technology Administration, 1998).

...and "Greenfields"

Canadian companies are continuing to set up newly-built or "greenfield establishments" in the U.S.

They are centred in the mid-south, in areas spanning the Mississippi River and a number of states in the plains.

Canadian-owned Greenfield manufacturing establishment, relative concentration of employment by economic area, 1992



Note: The location quotient for an economic area is calculated as Canadian-owned establishments' share of employment in the areas greenfield manufacturing establishments divided by Canadian-owned establishments' share of employment in the nation's greenfield manufacturing establishments.
Source: U.S. Dept. of Commerce, "Survey of Current Business", May 1999

Other commercial links

Our capital/financial markets are becoming more integrated...

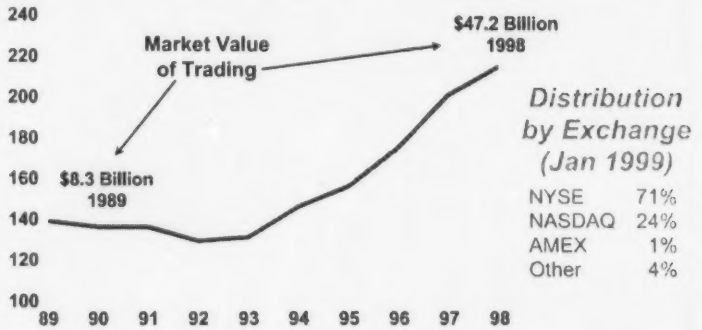
Access to pools of capital is very important to business so as to finance growth and innovation.

Canadian companies are accessing increasing amounts of capital in the U.S.

- **There has been dramatic growth in cross-listing of Canadian companies on the TSE and U.S. stock markets.**
- **And more and more Canadian firms are looking to the NASDAQ for capital.**

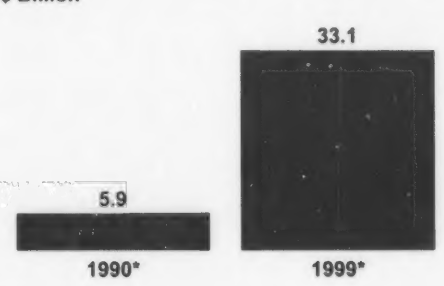
Increasingly, Canadian companies are finding capital in the U.S. for the initiation, expansion and modernization of business activities.

Number of interlisted stocks on the TSE



Source: TSE Review

Market value of Canadian firms listed on the NASDAQ



* As of Jan 1st
Source: NASDAQ

We are also witnessing a rise in mergers & acquisitions...

Canadian-based firms are active players in the globalization of business. They have been busy in the recent global merger and acquisition boom.

Many mergers involve companies seeking greater economies of scale. New technologies are permitting the rapid transfer of critical information, enabling companies to invest in a wider range of ventures — around North America and the world.

Top 10 acquisitions of U.S.-based companies by Canadians announced during 1998

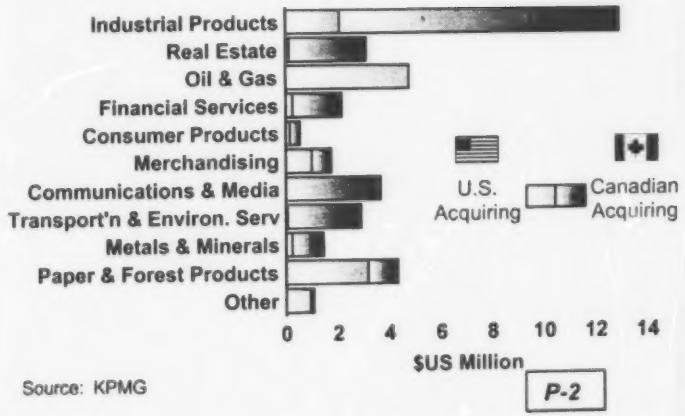
Value (*Estimate) $ Billion	Acquiror (Canada)	Target (U.S.)
$9.9	Northern Telecom Ltd.	Bay Networks Inc
$4.6	Teleglobe Inc.	Excel Communications
$3.3	Canadian National Railway Co.	Illinois Central Corp
$1.7	Placer Dome Inc.	Getchell Gold Corp
$1.3	Fairfax Financial Holdings Ltd.	TIG Holdings Inc.
$0.9	Brookfield Properties Corp.	World Financial Properties
$0.8	Trizec Hahn Corp	Real estate portfolio (U.S.) Equitable Cos. Inc
$0.7	Laidlaw Inc.	Greyhound Lines Inc.
$0.7	Fairfax Financial Holdings Ltd	Crum & Forster Holdings Inc.
$0.6	Donohue Inc.	Paper mill Champion International Corp.

Source: Mergers and Acquisitions in Canada, 1998 Annual Directory

Mergers and acquisitions involving Canadian companies*

* $US, 1998 deals
Source: KPMG

Value of merger and acquisition activity grouped by industry



Source: KPMG

P-2

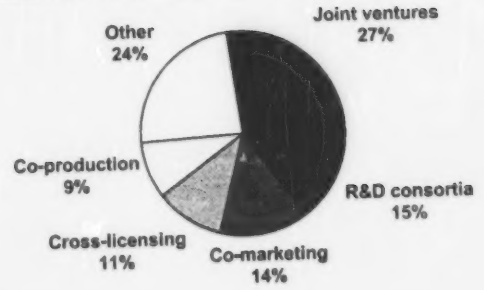
...and other cross-border corporate ties

We are also witnessing a rise in new relationships, including more joint corporate ventures and cross-relationships:

- To gain access to technologies and talent.
- To co-operate in costly R&D and innovation.
- To access supplier arrangements.

In the pursuit of new markets, businesses are looking at the benefits of close corporate ties with companies already in the market.

Strategic alliances



Source: Sunder Magun, "The Development of Strategic Alliances in Canadian Industries: A Micro Analysis", Industry Canada, 1998

global partners

supplier-relationships

joint ventures

research consortia

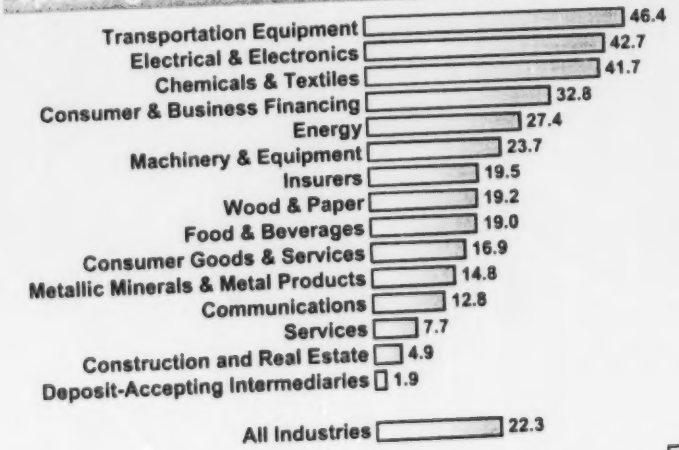
In some areas, U.S. foreign ownership is edging up

The share of foreign-controlled corporate operating revenues is still rising.

Key industries include Transportation Equipment, Electrical & Electronics, Chemicals & Textiles and Consumer & Business Financing, which are integral to the well-being and future prosperity of other industries.

Share of foreign-controlled corporate operating revenues in Canada

Share of U.S.-controlled corporate operating revenues by industry, 1996



Source: Industry Canada compilations based on Statistics Canada data

We are also playing a strategic role in IP activity...

U.S. firms have a surplus over Canadian firms in the exchange of intellectual property.

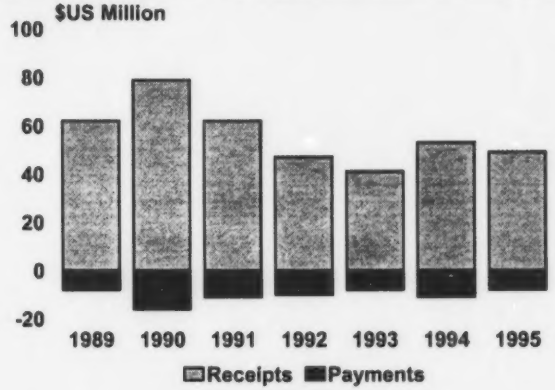
- **In 1995, U.S. receipts from technology licensing transactions with Canada were over 6 times higher than payments made by U.S. firms to Canada.**

Top 10 Canadian organizations with U.S. patents, 1994-98

1	Individuals	4,077
2	Northern Telecom Ltd.	335
3	XEROX Corporation	317
4	National Research Council of Canada	119
5	University of British Columbia	115
6	IBM Corporation	95
7	Merck Frosst Canada, Inc.	72
8	Mitel Corporation	67
9	Telefonaktiebolaget LM Ericsson	60
10	Exxon Research & Engineering Co.	56
	Hydro-Quebec	56
	Total Granted to Canada	11,698

Source: U.S. Patent and Trademark Office

U.S. royalties and fees generated from the exchange of industrial processes* between unaffiliated companies



* Patents and other proprietary inventions and technologies
Source: U.S. National Science Foundation

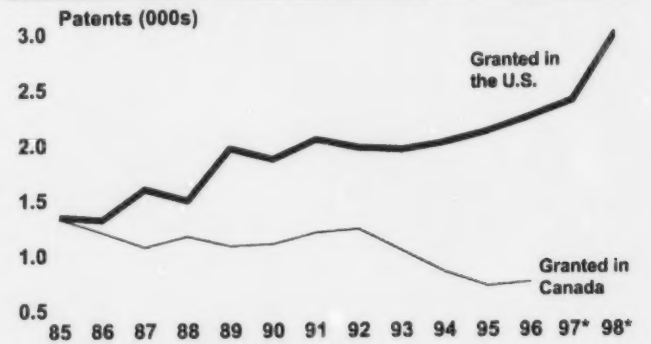
Investing in each other's future

...and cross-border patent activity is increasing

Canada still receives the largest share of its foreign patents from American investors, and the U.S. receives the largest share of foreign patents from Canadians (however, each has been falling over time).

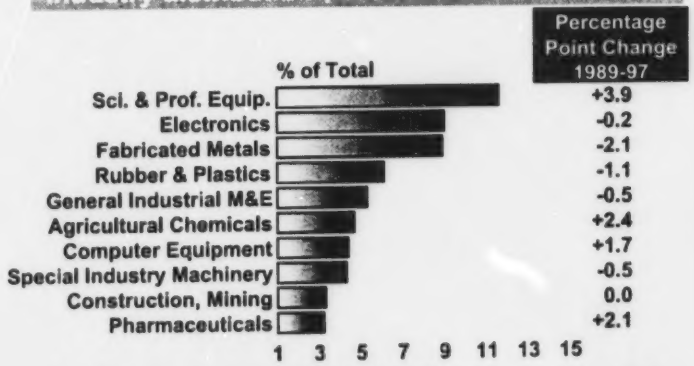
An important measure of innovation and increasing economic relations between the two nations is cross-patenting. While R&D pertains to the input side of the innovative process, patents focus on innovative outputs.

Patents granted to Canadian inventors



* 1996 most recent data for Canada
Source: Canadian Intellectual Property Office; U.S. Patent and Trademark Office

U.S. patents granted to Canadian inventors, industry distribution*, 1997



* Excluding aggregate category "all other industries"
Source: U.S. Patent and Trademark Office

Our "new economy infrastructure" is growing...

The Internet has done wonders for making the world a "smaller" place.

Businesspeople can locate and read economic reports electronically from around Canada and the U.S. They can learn about emerging opportunities, discuss issues and "brain-storm" with colleagues and consultants thousands of miles away.

The Internet has greatly expanded the possibilities for business to:

- *access information...*
- *learn about new developments...*
- *submit designs and participate in the immediate work-flow of others sitting thousands of kilometres away across the border.*

...and continues to bring us closer together

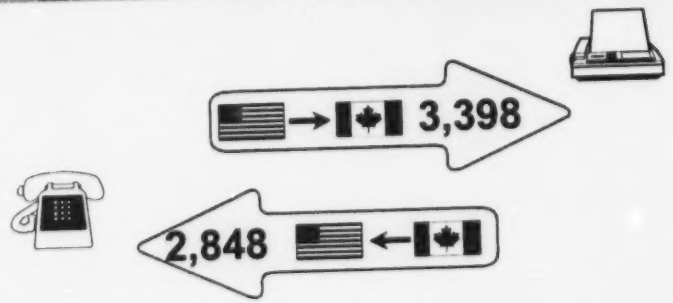
The busiest telecommunications traffic in the world is between Canada and the U.S.

- **In 1996, there were 6 billion minutes of traffic.**
- **And the growth rate is double that of other international routes.**

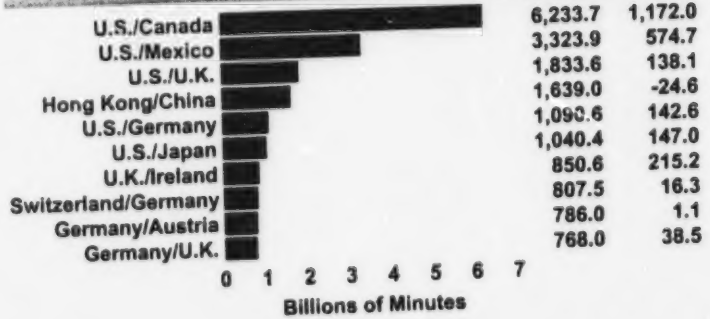
And information technology/infrastructure is continually being improved — especially in the area of technical business links (faxes, 1-800/888/900-calls, web-addresses)

A prerequisite for a successful knowledge-based economy is a well-developed information infrastructure. As we enter into the 21st century, information infrastructure is becoming as important as transportation infrastructure was at the beginning of the 20th century.

Telecommunication traffic, 1996
Millions of minutes of traffic, 1996



Top 10 international routes, 1996



	Millions of Minutes	1995-96 Net Change
U.S./Canada	6,233.7	1,172.0
U.S./Mexico	3,323.9	574.7
U.S./U.K.	1,833.6	138.1
Hong Kong/China	1,639.0	-24.6
U.S./Germany	1,090.6	142.6
U.S./Japan	1,040.4	147.0
U.K./Ireland	850.6	215.2
Switzerland/Germany	807.5	16.3
Germany/Austria	786.0	1.1
Germany/U.K.	768.0	38.5

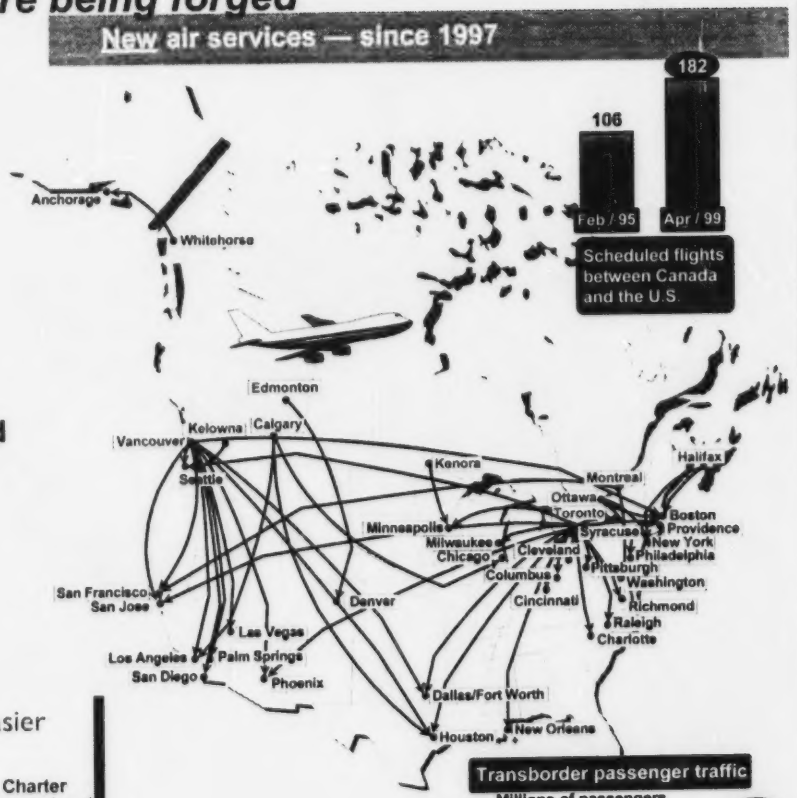
Source: TeleGeography, Inc.

Movement of people

Stronger transportation links are being forged

Transborder air services continue to improve:

- **With 47 new air-links created in 1997 and 1998, transborder passenger traffic has increased rapidly over the past few years.**



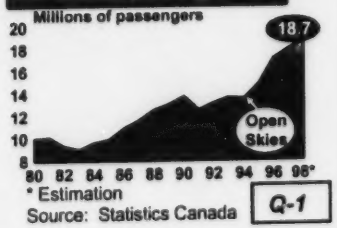
Business travel to and from the U.S. is being made easier

Scheduled Air Services

	Vancouver	Calgary	Toronto	Ottawa	Montreal	Halifax	Other	Charter Conversions*
Feb / 95	16	9	37	7	17	2	18	30
Dec / 98	35	14	66	12	23	5	20	8

* Charter services operated by Air Canada and Canadian Airlines prior to Feb / 95 that were later converted to scheduled flights.
Source: Transport Canada

Open Skies was signed on Feb. 24, 1995.
Scheduled flights are by major carriers.
Source: Transport Canada



Source: Statistics Canada

Q-1

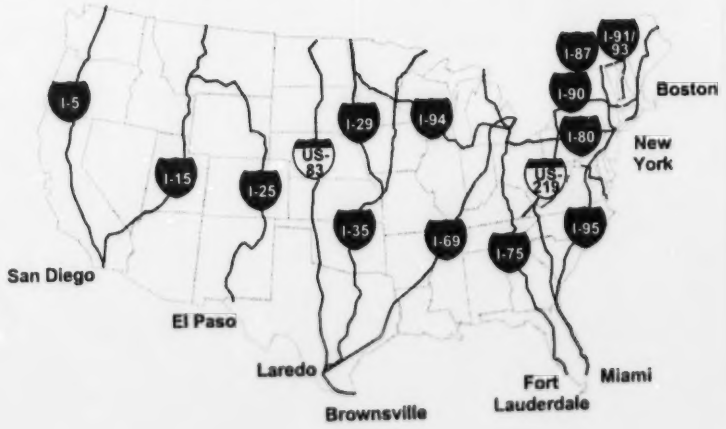
They include "deeper" transportation links...

There are many "trade corridors" — many actively promoted by municipal authorities, businesses and trade-related organizations on both sides of the border.

- **They promote trade, advertise travel advantages and seek ways to facilitate travel flow.**

- **They act to ease the transport of goods and services "deeper" into the U.S. market and beyond.**

Canada's transportation infrastructure is already well-connected to that of the U.S.



Select Transborder Highway Corridors

B.C. to San Diego (via I-5)
Alberta to San Diego (via I-15)
Alberta to El Paso (I-15/25)
Man./Sask. to Brownsville (via US 83)
Winnipeg to Laredo (via I-29/35)
Winnipeg/Thunder Bay to Laredo (via I-35)
Winnipeg to Detroit to Sarnia (via I-94)
Winnipeg to New York (via I-80)
Sault Ste. Marie to Fort Lauderdale (via I-75)
Sarnia to Laredo (via I-69)
Ontario (Fort Erie) to Miami (via US-219)
Ontario (Fort Erie) to Boston (via I-90)
Quebec to New York (via I-87)
Quebec to Boston (via I-91/93)
New Brunswick to Miami (via I-95)

...that are also more "active" links...

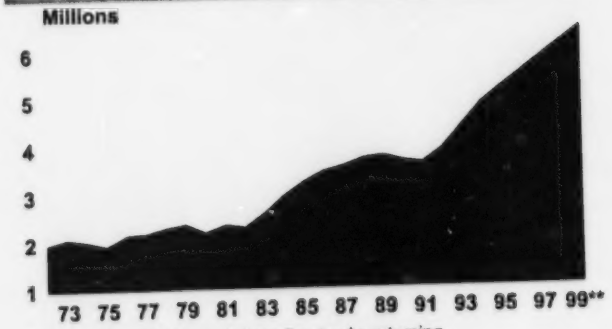
Cross-border truck flows have been particularly strong.

- **Since 1991, they have increased some 78%, to nearly 17,500 vehicles per day.**

Our rail exports to the U.S. have also shot up since 1991, reflecting increased demand for heavy commodities.

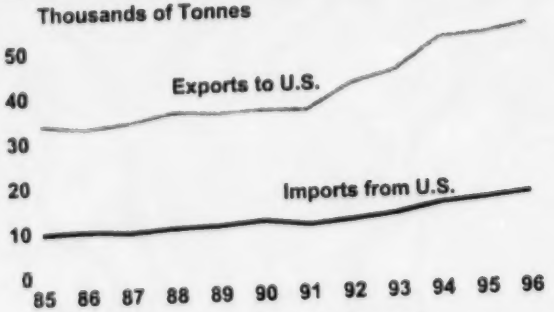
The nature of Canada's exports such as forest products, fertilizer materials and grains has made rail a more expedient form of transportation.

Transborder crossings*
Annual truck traffic



* U.S. trucks entering and Canadian trucks returning.
** Numbers are based on figures for the first quarter of 1999.
Source: Statistics Canada

Canada/U.S. rail exports and imports



Source: Statistics Canada, Cat. 52-216 for the period 1987 to 1995; Transport Canada

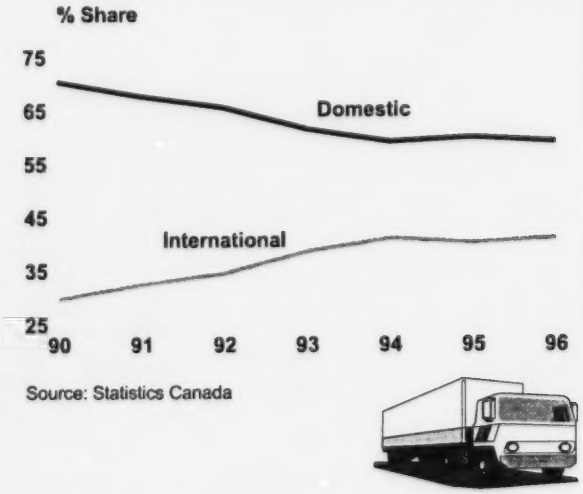
...and reflect the shifting pattern of economic activity

The relative traffic share between domestic and international markets has been dramatically shifting.

Technology to improve speed:

A conceptual design for an Intelligent Transportation Border Crossing System is being tested at the Peace Bridge between Ontario and New York and the Ambassador Bridge between Ontario and Michigan. This could allow Customs and Immigration pre-clearance and facilitate vehicle and driver inspection.

Distribution of truck traffic



Source: Statistics Canada

Q-4

Business people are much more "cross-border mobile"...

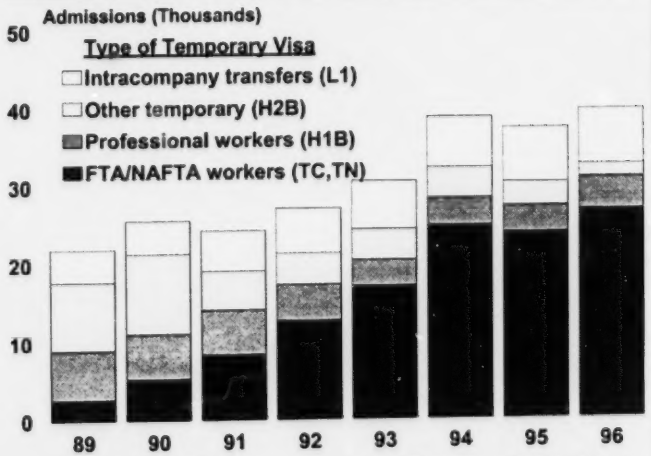
Since 1989, the number of Canadians entering the U.S. on a temporary basis has been rising — from about 25,000 in 1989 to over 40,000 in 1996.

Under the FTA and subsequently NAFTA, entry requirements to the U.S. eased substantially*, allowing for increased entry as well as substitution out of more stringent temporary visa categories.

*** Under NAFTA, U.S. work visas are open to virtually anybody with a university education and some work experience.**

Compared as a proportion of the population with university education, the emigration of skilled workers roughly doubled between the 1960s and 1996 and tripled by 1997.

Number of Entries to the U.S. of Canadians with Temporary Visas*



* The data include initial entries to the U.S., as well as renewals and re-issue of temporary visas which expire when the holder has been outside the U.S. for more than 30 days.
Source: U.S. Immigration & Naturalization Service

...as are others for pleasure and study

The top destination for Canadian tourists is next door. For the first time since 1987, more American tourists visited Canada than Canadians to the U.S.

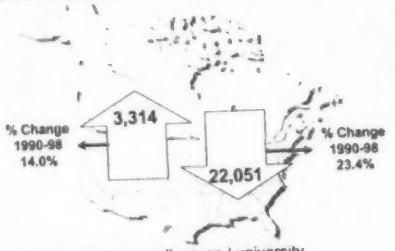
More students are studying cross-border. About 22,051 Canadian students are studying in U.S. colleges and universities, many pursuing graduate degrees. There were about 3,314 U.S. students studying in Canada.

Many thousands of Canadians make the U.S. home for part of their year — enjoying their retirement years, and spending the winter months in the U.S.

Each year, many Canadians and Americans make a permanent switch in residency.

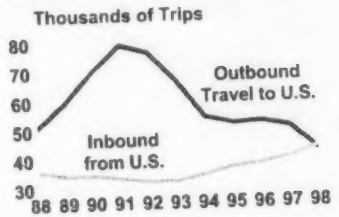
Increased tourism helps citizens with first-hand familiarity, which helps build even stronger bridges between the two countries.

Students studying across the border



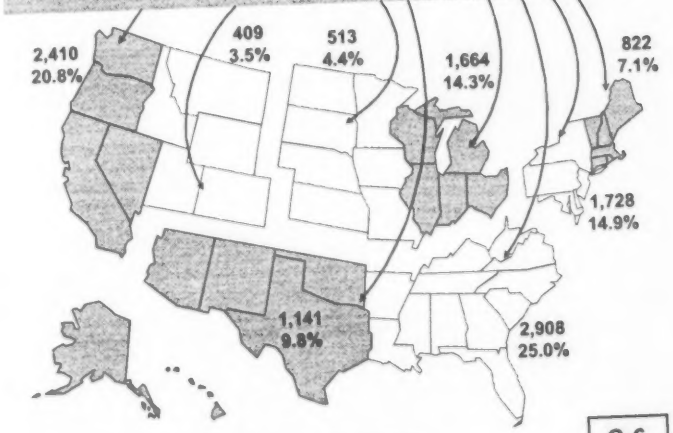
* 1998 school year, college and university
Source: Association of Universities and Colleges of Canada

Canada - U.S. tourism



Source: Statistics Canada

Canadian-born immigrants to U.S., fiscal 1997



Source: U.S. Immigration & Naturalization Service

Q-6

Concluding notes

Our links are truly strong and growing...

Our economic links with the U.S. are strong and getting stronger. They are developing quickly not only in trade and investment, but as well in many new dimensions, such as in cross-border R&D spending and collaboration. In many ways, these new links are in response to the forces of rapid globalization, the information revolution, and the transition by all countries towards more knowledge-based activities.

As we strive to position ourselves for the future, it is paramount that Canada more fully seize opportunities in the U.S. — in traditional areas such as resources, but as well in other areas that could provide us sustainably higher prosperity. Our growth as a KBE is dependent on the exploitation of opportunities afforded by our closer economic relations. This entails developing competitive advantages that could lead to a brighter and more promising future.

In the next issue of the Micro-Economic Monitor, we will feature Part 2 — Opportunities and Challenges. In Part 2, we will identify the key benefits to our close economic relations, as well as opportunities, which if taken advantage of, will help position us for the future.

...but we still need to capitalize on our opportunities

For Further Information

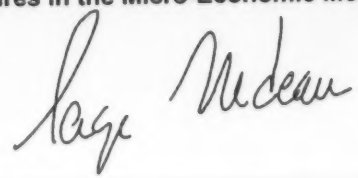
We welcome your questions, comments and suggestions? You can reach us by ...

sending us a letter:	**Serge Nadeau** **Director General** **Micro-Economic Policy Analysis** **Industry Canada** **235 Queen Street** **Ottawa, Ontario K1A 0H5**
e-mailing:	**nadeau.serge@ic.gc.ca**
phoning:	**(613) 954-3487**
or faxing us at:	**(613) 941-3859**

The *Micro-Economic Monitor* is prepared on a quarterly basis by the Micro-Economic Analysis Directorate of Industry Canada. The Monitor provides a quick and easy-to-read update on Canada's economic performance. It also provides topical in-depth reports on current economic issues from a micro-economic perspective.

The current analysis update was prepared by Joseph Macaluso, Alison McDermott, and Karen Smith, under the direction of Shane Williamson.

This quarter's feature was prepared by Gary Sawchuk, Aaron Sydor and Cemile Sancak. It benefitted from comments and suggestions from Ram Acharya, Dan Ciuriak, Shenjie Chen and Coronel Clea from the Department of Foreign Affairs and International Trade. Presentation / data assistance was provided by Caroline Farmer, Ashfaq Ahmad, Jennifer Brill, Gillian Elias, Wulong Gu, Jennifer Kennedy, Shauna Martin, Khamlay Pung, Karen Smith, Patrick Taylor and Lori Whewell. Proof-reading by Dave Dupuis, Shane Williamson and Someshwar Rao. Translation by Lucie Larocque and production support by Cliff Lee-Sing and Sue Hopf. Gary Sawchuk is the General Editor of the Special Features in the Micro-Economic Monitor (and is responsible for all remaining errors).



ISSN 1206-260X